



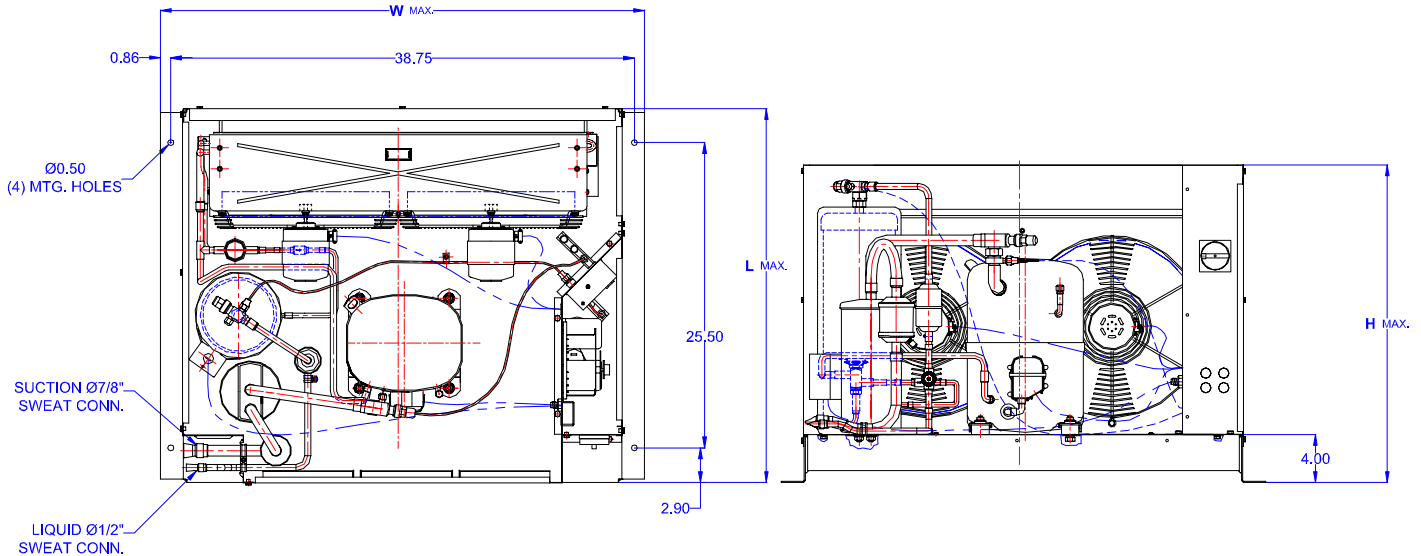
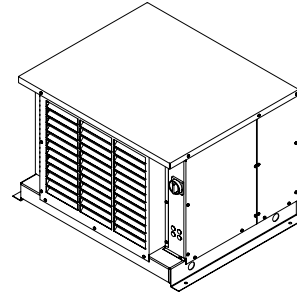
# TECUMSEH HERMETIC CONDENSING UNIT

AVA4540EXNHL  
TPC\_\_rev 03  
February 27, 2004

**Model** AVA4540EXNHL  
**BOM** 2K3127-2E

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**Air Cooled** 3 HP  
**Application** High Temp  
**Refrigerant** R 22



| Model               | Dimensions (inch) |       |       | Line connections |           | Pumpdown   | Air flow | Oil Ch. | Gross weight |
|---------------------|-------------------|-------|-------|------------------|-----------|------------|----------|---------|--------------|
|                     | L                 | W     | H     | Suction          | Liquid    | 90% @ 90°F | SCFM     | Oz.     | Lbs.         |
| <b>AVA4540EXNHL</b> | 31.50             | 40.50 | 26.75 | 7/8 Sweat        | 1/2 Sweat | 26.38      | 1550     | 55      | 320          |

Factory charge 20 psig dry air, **MUST BE EVACUATED**

| Evaporator | Ambient Temperatures |              |             |            |            |              |             |            |            |              |             |            |            |              |             |            |            |
|------------|----------------------|--------------|-------------|------------|------------|--------------|-------------|------------|------------|--------------|-------------|------------|------------|--------------|-------------|------------|------------|
|            | 80°F                 |              |             |            |            | 90°F         |             |            |            | 100°F        |             |            |            | 110°F        |             |            |            |
| °F         | Psig                 | BTUH         | Watts       | Head       | Cond T     | BTUH         | Watts       | Head       | Cond T     | BTUH         | Watts       | Head       | Cond T     | BTUH         | Watts       | Head       | Cond T     |
| 10         | 32.8                 | 21043        | 2978        | 198        | 100        | 19641        | 3064        | 226        | 108        | 17326        | 3095        | 257        | 119        | 15487        | 3131        | 290        | 128        |
| 15         | 37.7                 | 24192        | 3159        | 207        | 103        | 22233        | 3257        | 235        | 111        | 19833        | 3314        | 266        | 122        | 17919        | 3365        | 300        | 130        |
| 20         | 43.0                 | 27061        | 3352        | 216        | 105        | 24901        | 3461        | 244        | 114        | 22389        | 3542        | 276        | 124        | 20369        | 3611        | 310        | 132        |
| 25         | 48.7                 | 30010        | 3557        | 226        | 108        | 27646        | 3677        | 254        | 117        | 24996        | 3780        | 287        | 127        | 22840        | 3869        | 322        | 135        |
| 30         | 54.8                 | 33039        | 3775        | 237        | 112        | 30467        | 3904        | 265        | 121        | 27652        | 4028        | 298        | 130        | 25329        | 4138        | 334        | 138        |
| 35         | 61.4                 | 36148        | 4005        | 249        | 117        | 33364        | 4143        | 277        | 123        | 30358        | 4286        | 310        | 132        | 27839        | 4419        | 346        | 141        |
| 40         | 68.5                 | 39336        | 4247        | 261        | 119        | 36337        | 4393        | 289        | 127        | 33114        | 4553        | 323        | 136        | 30367        | 4712        | 360        | 144        |
| <b>45</b>  | <b>76.0</b>          | <b>42604</b> | <b>4501</b> | <b>275</b> | <b>123</b> | <b>39386</b> | <b>4655</b> | <b>302</b> | <b>131</b> | <b>35920</b> | <b>4830</b> | <b>336</b> | <b>138</b> | <b>32915</b> | <b>5017</b> | <b>374</b> | <b>147</b> |
| 50         | 84.0                 | 45952        | 4768        | 289        | 127        | 42512        | 4928        | 316        | 134        | 38776        | 5116        | 350        | 142        | 35483        | 5333        | 389        | 151        |
| 55         | 92.6                 | 49379        | 5047        | 303        | 131        | 45714        | 4213        | 331        | 137        | 41682        | 5412        | 364        | 145        | 38070        | 5660        | 404        | 154        |

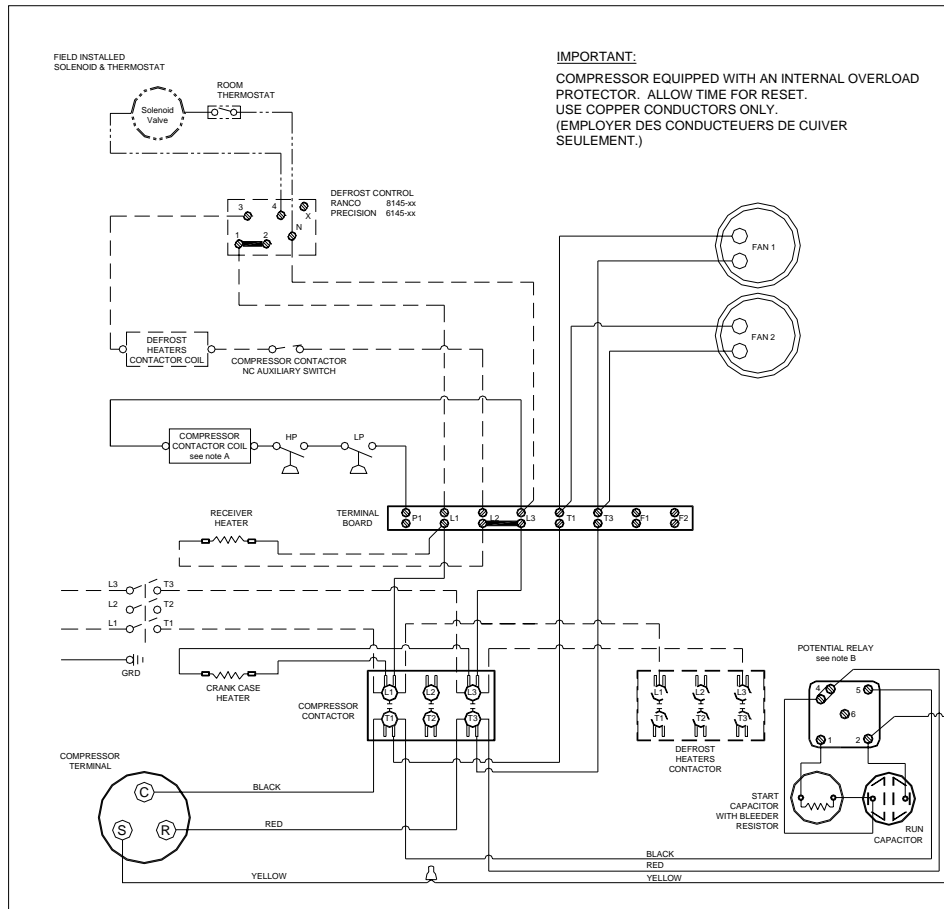
Parts/Specifications

| STANDARD               |                  | OPTIONAL              |               |
|------------------------|------------------|-----------------------|---------------|
| Unit BOM               | 2K3127-2E        | Fan Motor             | 810S050A99    |
| Unit MODEL             | AVA4540EXNHL     | Fan Motor Qty         | 2             |
|                        |                  | Fan Motor RLA         | 1.3           |
| Refrigeration RANGE    | +20F TO +55F     | Fan Blade             | 51568         |
| Design Pressure Low    | 150              | Fan Guard             | 70831         |
| Design Pressure High   | 450              | Shroud                | 70648-2       |
| Volts - HZ - Ph        | 208-230-60-1     |                       |               |
| Voltage Range          | 253 - 197        | High Pressure switch  | 84095-1       |
| Min. Circuit Ampacity  | 29.3             | Low Pressure Control  | 84026-D       |
| Max. Fuse Size         | 50               | Dual Pressure Control |               |
|                        |                  | Condenser             | 50858         |
| Compressor MODEL       | AVA5542EXN       | Head Master Valve     | LAC-4-180-3/8 |
| Compressor BOM         | AV144ET-001-A2   | Check Valve           | CV-020-1011   |
| Compressor LRA         | 108              | Process Valve         |               |
| Compressor RLA         | 21.2             | Liquid Valve          | 31590         |
|                        |                  | Suction Valve         | 31529-1       |
| OverLoad               | Internal         |                       |               |
| Relay                  | 820ARR3H46       | Receiver              | 51082-2       |
| Run Capacitor          | 85PR440F28       | Receiver Qty          | 1             |
| Run Capacitor Rating   | 40MFD 440V(M)VDE | Accumulator           | TK00042000    |
| Start Capacitor        | 85PS330D16       | Liquid Filter         | 52000-084D    |
| Start Capacitor Rating | 130-156 MFD 330V | Sight Glass           | SG-08D        |
| Contactor              | 91014            | Suction Filter        | 70822-5       |
|                        |                  |                       |               |
| Unit Drawing           | DGU1920-KE       | CrankCase Heater      | 90699         |
| Wiring no Fan controls | WD21-2XT2        |                       |               |

BOM INDEX DESCRIPTION

2xYYYY- 2ERA(F)TnDS

- E Enclosure
- R Receiver Heater
- A Adjustable fan control
- F Fixed fan Control
- T1 Defrost timer option
- T2 Defrost timer & Defrost Heaters Contactor
- D Disconnect
- S Solenoid liquid Valve (supplied loose)



**IMPORTANT:**  
 COMPRESSOR EQUIPPED WITH AN INTERNAL OVERLOAD PROTECTOR. ALLOW TIME FOR RESET. USE COPPER CONDUCTORS ONLY. (EMPLOYER DES CONDUCTEURS DE CUIVRE SEULEMENT.)

NOTES

FIELD WIRING NOTES

- ALL FIELD WIRING MUST BE DONE IN COMPLIANCE WITH ALL APPLICABLE LOCAL AND NATIONAL CODES.
- CONNECT INCOMING POWER LEADS FROM POWER SUPPLY TO L1, AND L3 IN COMPRESSOR CONTACTOR (L1 AND L2 IF TWO POLE CONTACTOR) OR TO L1 AND L3 IN DISCONNECT SWITCH (IF PROVIDED). USE COPPER CONDUCTORS ONLY. (EMPLOYER DES CONDUCTEURS DE CUIVRE SEULEMENT.) PROVIDE EQUIPMENT GROUNDING CONDUCTOR. USE 75°C (MIN.) WIRING.
- PLACE JUMPER ACROSS P1 AND L1 IN TERMINAL BOARD IF NO OTHER CONTROLLING DEVICE IS INSTALLED.
- DEFROST HEATERS LOADS SHOULD NOT BE HIGHER THEN THE MAXIMUM HEATERS LOAD INDICATED ON THE UNIT LABEL.

GENERAL NOTES:

- CONTACTOR COIL CIRCUIT IS FACTORY CONNECTED TO 230 V SOURCE IN PANEL AS SHOWN
- WITH ANY T.P.Co. APPROVED START RELAY USED, CONNECT LEADS TO SAME NUMBERED TERMINALS REGARDLESS OF LOCATION
- COMPRESSOR EQUIPPED WITH AN INTERNAL OVERLOAD PROTECTOR. ALLOW TIME FOR RESET.

LP LOW PRESSURE CONTROL

HP HIGH PRESSURE SWITCH

FACTORY COMPONENTS

OPTIONAL FACTORY COMPONENTS

OPTIONAL FIELD COMPONENTS

CONDENSING UNIT WIRING, 230V 60Hz 1 Ph, NO fan controls, T1 & T2 defrost options

REVISION

MAY 21, 2003

WD21-2XT2